UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
WILSON, ROBERT W

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/027,006	KOBAYASHI, MASAYOSHI
	Examiner	Art Unit
	Robert W. Wilson	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>11 September 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-55</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,2,14,15,26,32,33,38-42 and 48-50</u> is/are rejected.

7)☐ Claim(s) <u>3-13,16-31,34-37,43-47 and 51-55</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some *   c)☐ None of:

   1.☒ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 40-41 & 48-49 are rejected under 35 U.S.C. 102(B) as being anticipated by

Bhagwat (U.S. Patent No.: 5,941,988).

Referring to claim 40, Bhagwat teaches: A server (Figure 2 & 4) in a communication system (Fig 2) for conducting packet communication between a server (13 per Fig 2) and a client (11 per Fig 2) through a switching apparatus (12 per Fig 2)

From the time of relay of a data acquisition request from said client by said switching apparatus until the end of the transmission of an acknowledgment packet to be transmitted to said client transmit said packet to the client by one-way splicing (From the time when the client sends open the connection (request) per col. 5 lines 7 to 40 until ACK comes from the server a TCP connection is sent up per col. 9 lines 55 to 67. The TCP connection is single ended connection (one-way splicing) per col. 3 line 40)

In Addition Bhagwat teaches:

Regarding claim 41, wherein to said client said server transits said packet with header information rewritten to have the contents to be set when the packet is transmitted from said switching apparatus (The server sends packets with headers and contents set to the client per col. 7 lines 59 to col. 8 line 15)

Referring to claim 48, Bhagwat teaches: A client (Client per Figure 2 & 4) in a communication system (Fig 2) which conducts packet communication (col. 3 lines 35 to 45) between a server (13 per Fig 2) and a client (11 per fig 2) through a switching apparatus (12 per Fig 2)

From the time of relay of a data acquisition request to said server by said switching apparatus until the end of transmission of an acknowledgement packet to be received form said server, receive said packet form the server by one-way splicing (From the time when the client sends open the connection (request) per col. 5 lines 7 to 40 and an ACK comes from said server a TCP connection is sent up per col. 9 lines 55 to 67 conducting single end-to-end connection to the client per col. 3 line 40 or one way splicing)

In Addition Bhagwat teaches:

Regarding claim 49, wherein to said client said server transits said packet with header information rewritten to have the contents to be set when the packet is transmitted from said switching apparatus (The client receives packets with headers rewritten and contents set per col. 7 lines 59 to col. 8 line 15)

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1, 14, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhagwat

(U.S. Patent No.: 5,941,988) in view of Oyama (U.S. Patent No.: 6,108,329) .

Referring to claim 1, Bhagwat teaches: A communication system (Client, Proxy and Server per Fig 2 or system) using packet switching (packet based networks per col. 3 lines 35 to 45 perform packet switching) for conducting packet communication between a server (server 13 per Fig 2) and a client (Client 11 per Fig 2) through a switching apparatus (Proxy 12 per Fig 2) Wherein

During relay of a packet to be transmitted from said server to said client said switching apparatus rewrite header information of the packet to have the contents which are set when the packet is sent form said switching apparatus and send said packet to said client (Figure 4 shows data flow or packets transferred from said server to client and proxy rewrites headers per col. 7 line 58 to col. 8 line 15)

From the time of relay of a data acquisition request from said client the end of the transmission of an acknowledgment packet from said server to said client, said switching apparatus conducts a one-way splicing processing in the direction from the server to the client and successively conducts retransmission control and flow control of communication in the direction from said client to said server (From the time when the client sends open the connection (request) per col. 5 lines 7 to 40 and an ACK comes from said server a TCP connection is sent up per col. 9 lines 55 to 67 the proxy or switching apparatus conducts single end-to-end connection per col. 3 line 40)_

Bhagwat does not expressly call: retransmission and flow control

Oyama teaches: retransmission and flow control per col 1 lines 45 to 50.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add retransmission and flow control of Oyama to the communication system of Bhagwat in order to implement TCP which is standards compliant that will interoperate with legacy TCP systems .

Referring to claim 14, Bhagwat teaches: A switching apparatus for relaying packets . communication through a communication network between a plurality of server and clients (The Proxy 12 per Fig 2 is the apparatus which relays packets between a server and client per Fig 2)

During relay of a packet to be transmitted form one of the plurality of servers to one of the plurality of clients said switching apparatus rewrites header information of the packet to have the contents which are to be set when the packet is sent from the switching apparatus and send packet to said client (The Proxy 12 per Fig 2 is the switching apparatus which rewrites the header information between the client and server and leaves the contents set per col. 7 line 56 to col. 8 line 14)

From the time of relay of a data acquisition request from said client the end of the transmission of an acknowledgment packet from said server to said client, said switching apparatus conducts a one-way splicing processing in the direction from the server to the client and successively conducts retransmission control and flow control of communication in the direction from said client to said server (From the time when the client sends open the connection (request) per col. 5 lines 7 to 40 until an ACK is received from the server,   a single ended connection (one-way splicing) exists between the client and server per col. 9 lines 55 to 67. The proxy or switching apparatus conducts single end-to-end connection (one-way splicing) per col. 3 line 40)_

Bhagwat does not expressly call: retransmission and flow control

Oyama teaches: retransmission and flow control per col. 1 lines 45 to 50.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add retransmission and flow control of Oyama to the communication system of Bhagwat in order to implement TCP which is standards compliant that will interoperate with legacy TCP systems .

Referring to claim 26, Bhagwat teaches: A packet switching method of a switching apparatus for relaying packet communication through a communication network between a plurality of server and clients the method comprising (The Proxy per Fig 2 performs the method of performing packet switching (packet based networks per col. 3 lines 35 to 45 perform packet switching) for conducting packet communication between a server (server 13 per Fig 2) and a client (Client 11 per Fig 2) through a switching apparatus (Proxy 12 per Fig 2) the method comprising:

plurality of clients said switching apparatus rewrites header information of the packet to have the contents which are to be set when the packet is sent form the switching apparatus and send packet to said client (The Proxy 12 per Fig 2 is the switching apparatus which rewrites the header information between a client and server per col. 7 line 56 to col. 8 line 14)

From the time of relay of a data acquisition request from said client the end of the transmission of an acknowledgment packet from said server to said client, said switching apparatus conducts a one-way splicing processing in the direction from the server to the client and successively conducts retransmission control and flow control of communication in the direction from said client to said server (From the time when the client sends open the connection (request) per col. 5 lines 7 to 40 until an ACK comes from the server a TCP connection is sent up per col. 9 lines 55 to 67 the proxy or switching apparatus conducts single end connection (one way splicing) per col. 3 line 40

Bhagwat does not expressly call: retransmission and flow control

Oyama teaches: retransmission and flow control per col 1 lines 45 to 50.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add retransmission and flow control of Oyama to the communication system of Bhagwat in order to implement TCP which is standards compliant that will interoperate with legacy TCP systems

5.   Claims 2, 15, 32, & 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhagwat (U.S. Patent No.: 5,941,988) in view of Oyama (U.S. Patent No.: 6,108,329) further in view of Hayashi (U.S. Patent No.: 6,598,071)

Referring to claim 2 the combination of Bhagwat and Oyama teach: the communication system set for in claim 1, wherein said client side accepts a connection from said client to manage a connection with the client for transmitting and receiving a packet to and from the client (client opens or accepts a connection for transmitting a receiving packets per col. 5 line 6 to 40 per Bhagwat.

And a server side for managing a connection with the server for transmitting and receiving a packet to and from the server (A connection is set up with the server for transmitting and receiving packets to and from the server per col. 5 line 6 to 40 per Bhagwat).

And means for during relay of the packet to be transmitted from said server to said client rewriting the header information of said packet to send said packet rewritten to said client (Proxy 12 per Fig 2 is the means and performs rewriting the header per col. 7 line 57 to col. 8 line 15

And means for successively conducting one-way in direction from said server to the client and successively conducting retransmission control and flow control for communication in the direction from said client to said client side processing unit and communication in the direction

for said server without cutting off an established connection (Proxy is the means for single end to end connection (one-way splicing) per col. 3 line 40 and per col. 3 line 35 to col. 8 line 15)

The combination of Bhagwat and Oyama do not expressly call for: server having a processing unit or client for having a processing unit

Hayashi teaches: server has a controller or processing unit per Fig 2 and client has a controller or processing unit per Fig 5

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the processing unit in the server and processing unit in the controller of Hayashi to the system of Bhagwat and Oyama in order to build a system with a server and a client because a client and server both require a processors in order to perform their respective tasks.

Referring to claim 15 the combination of Bhagwat and Oyama teach: the switching apparatus as set forth in claim 14, wherein said client side accepting a connection from said client to manage a connection with the client for transmitting and receiving a packet to and from the client (Client opens or accepts a connection for transmitting a receiving packets per col. 5 line 6 to 40 per Bhagwat.)

And a server side for managing a connection with the server for transmitting and receiving a packet to and from the server (A connection is set up on the server for transmitting a receiving packets the server per col. 5 line 6 to 40 per Bhagwat).

And means for during relay of the packet to be transmitted from said server to said client rewriting the header information of said packet to send said packet rewritten to said client (proxy 12 per Fig 2 is the means and performs per col. 7 line 57 to col. 8 line 15

And means for successively conducting one-way in direction from said server to the client and successively conducting retransmission control and flow control for communication in the direction from said client to said client side processing unit and communication in the direction for said server without cutting off an established connection (The proxy is the means for single end connection (one-way splicing) per col. 3 line 40 and per col. 3 line 35 to col. 8 line 15)

The combination of Bhagwat and Oyama do not expressly call for: server having a processing unit or client for having a processing unit

Hayashi teaches: server has a controller or processing unit per Fig 2 and client has a controller or processing unit per Fig 5

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the processing unit in the server and processing unit in the controller of Hayashi to the system of

Bhagwat and Oyama in order to build a system with a server and a client because a client and server both require a processors in order to perform their respective tasks.

Referring to claim 32, Bhagwat teaches: A method for performing communication through a communication network between a plurality of server and clients (The Proxy 12 per Fig 2 is the apparatus which relays packets between a server and client per Fig 2)

During relay of a packet to be transmitted form one of the plurality of servers to one of the plurality of clients said switching apparatus rewrites header information of the packet to have the contents which are to be set when the packet is sent form the switching apparatus and send packet to said client (The Proxy 12 per Fig 2 is the switching apparatus which rewrites the header information between a client and server without changing the contents per col. 7 line 56 to col. 8 line 14)

From the time of relay of a data acquisition request from said client the end of the transmission of an acknowledgment packet from said server to said client, said switching apparatus conducts a one-way splicing processing in the direction from the server to the client and successively conducts retransmission control and flow control of communication in the direction from said client to said server (From the time when the client sends open the connection (request) per col. 5 lines 7 to 40 until an ACK comes from said server per col. 9 lines 55 to 67. The proxy or switching apparatus conducts single end connection or one-way splicing per col. 3 line 40)_

Bhagwat does not expressly call: retransmission and flow control or a computer readable medium which stores a program capable of being executed on a computer .

Oyama teaches: retransmission and flow control per col 1 lines 45 to 50.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add retransmission and flow control of Oyama to the communication system of Bhagwat in order to implement TCP which is standards compliant that will interoperate with legacy TCP systems.

The combination of Bhagwat and Oyama do not expressly call for: computer readable medium which stored a program capable of being executed on a computer.

Hayashi teaches: a memory in a server per figure 2 and a memory in a client per Figure 5.

It would have been obvious to add the memory in a server and a memory in a client of Hayashi to the system of the combination of Bhagwat and Oyama in order to store a program executable on a processor because a processor is required to implement a method.

Referring to claim 38, Bhagwat teaches: A method for performing a switching on a server (Server per Figure 2 & 4 performs the method) in a communication system (Fig 2) for conducting packet communication (col. 3 lines 35 to 45) between a server (13 per Fig 2) and a client (11 per fig 2) through a switching apparatus (12 per Fig 2)

From the time of relay of a data acquisition request from said client by said switching apparatus until the end of the transmission of an acknowledgment packet to be transmitted to said client transmit said packet to the client by one-way splicing (From the time when the client sends open the connection (request) per col. 5 lines 7 to 40 until an ACK comes from said server per col. 9 lines 55 to 67 single end connection (one-way splicing) to the client per col. 3 line 40)

Bhagwat does not expressly call for: computer readable medium on the server which stores a program capable of being executed on a computer.

Hayashi teaches: a memory in a server per figure 2 and a memory in a client per Figure 5.

It would have been obvious to add the memory in a server of Hayashi to the server of the of Bhagwat in order to store a program executable on a processor because a processor is required to implement a method.

Referring to claim 39, Bhagwat teaches: A method for performing a switching on a client (Client per Figure 2 & 4 performs the method) in a communication system (Fig 2) for conducting packet communication between a server (13 per Fig 2) and a client (11 per fig 2) through a switching apparatus (12 per Fig 2)

From the time of relay of a data acquisition request to said server by said switching apparatus until the end of transmission of an acknowledgement packet to be received form said server, receive said packet form the server by one-way splicing (From the time when the client sends open the connection (request) per col. 5 lines 7 to 40 until an ACK comes from said server a TCP connection is sent up per col. 9 lines 55 to 67 which is single end connection (one-way splicing) to the client per col. 3 line 40)

Bhagwat does not expressly call for: computer readable medium on the client which stores a program capable of being executed on a computer.

Hayashi teaches: a memory on a client per Figure 5.

It would have been obvious to add the memory on a client of Hayashi to the client of Bhagwat in order to store a program executable on a processor because a processor is required to implement a method.

6.   Claims 42 & 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhagwat

(U.S. Patent No.: 5,941,988) in view of admitted prior art in the specification.

Referring to claim 42, Bhagwat teaches: the server as set forth in claim 41,

Bhagwat does not expressly call for: a sequence number indicative of in transmission data divided into individual packets order of data in the packet, a data length of the packet, and an Ack number indicative of a sequence number of data that a communication partner has already received.

The admitted prior art in the specification teaches: a sequence number indicative of in transmission data divided into individual packets order of data in the packet, a data length of the packet, and an Ack number indicative of a sequence number of data that a communication partner has already received per Pg 2 line 21 to Pg 3 line 6.

It would have been obvious to add the sequence numbering, data length, and ACK number functions of the admitted prior art in the specification to the system of the Bhagwat in order to build a system which is standard compliant and interoperates with legacy systems.

Referring to claim 50, Bhagwat teaches: the client as set forth in claim 49

Bhagwat does not expressly call for: a sequence number indicative of in transmission data divided into individual packets order of data in the packet, a data length of the packet, and an Ack number indicative of a sequence number of data that a communication partner has already received.

The admitted prior art in the specification teaches a sequence number indicative of in transmission data divided into individual packets order of data in the packet, a data length of the packet, and an Ack number indicative of a sequence number of data that a communication partner has already received per Pg 2 line 21 to Pg 3 line 6.

It would have been obvious to add the sequence numbering, data length, and ACK number functions of the admitted prior art in the specification to the system of the Bhagwat in order to build a system which is standard compliant and interoperates with legacy systems.

Allowable Subject Matter

7.   Claims 3-13, 16-25, 27-31, 34-37, 43-47, & 51-55 are objected to as being dependent

upon a rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims.

Response to Arguments

8.   Applicant's arguments with respect to claim1-55 have been considered but are moot in

view of the new ground(s) of rejection.

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075.

The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Doris To can be reached on 571/272-7629. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert W Wilson
Examiner
Art Unit 2616

RWW
11/17/06